Draft 2016-2019 Alaska Statewide Transportation Improvement Program

Alaska Department of Transportation & Public Facilities

Division of Program Development

Introduction to the STIP

The Alaska Statewide Transportation Improvement Program (STIP) is the state's four-year program for transportation system preservation and development. Federal statutes (23 USC 135) require that in order to use Federal transportation funding, the state must develop a STIP. The STIP must cover all surface transportation improvements for which partial or full federal funding is approved and that are expected to take place during the four-year duration of the STIP. Alaska's surface transportation program is mostly driven by federal funds and requirements and includes interstate, state and some local highways, bridges, ferries and public transportation.

There are many projects that are not required to be in the STIP. The STIP does not include aviation projects because Federal Aviation Administration (FAA) has its own similar system of project evaluation and fund distribution. Ports and harbors projects are not included in the STIP since financial assistance for ports and harbors is provided through the Municipal Harbor Facility Grant. Also, it is not required for the STIP to include wholly state-funded projects, or other projects that are not federally-funded in any way.

Overview

This document is the draft 2016-2019 STIP. It meets the requirements of Title 23 United States Code, Title 23 Code of Federal Regulations, and Title 17 of the Alaska Administrative Code. It must be fiscally constrained based upon reasonably expected funding. Staff reviews projects in the STIP for consistency with local land-use and transportation plans, as well as with applicable state policies and plans including the Statewide Long Range Transportation Policy Plan, the Highway Safety Improvement Plan, the State Bicycle and Pedestrian Plan, regional transportation plans and others.

Projects in the STIP must be consistent with, and implement, the policies of Let's Get Moving 2030, the Statewide Long Range Transportation Policy Plan (this plan is currently being updated). The plan articulates policies for system development, system preservation, management and operations, economic development, safety, security, environment and quality of life, and good government. It identifies numerous goals for each of the policies and establishes action steps for plan implementation. The Statewide Long-Range Transportation Policy Plan: Let's Get Moving 2030, is available on the DOT&PF website at http://dot.alaska.gov/stwdplng/areaplans/2030/.

The STIP is consistent with other planning efforts, including DOT's Highway Safety Improvement Plan, approved DOT Regional Transportation Plans (regional components of the Long Range Transportation Policy Plan),

Transportation Improvement Programs (TIPs) prepared by Anchorage and Fairbanks, municipal Comprehensive Plans and tribal transportation plans.

The STIP also reflects the goals of the state administration to support economic development, and seeks opportunities to link resource-rich areas to the state's highway, port and rail system.

STIP Revisions

STIP projects do not always proceed on schedule, so in order to maximize the state's ability to use its federal spending authority, projects not ready to advance at a critical time yield their place in the schedule to other projects that are ready to go. Such changes require amendments to the STIP using procedures established in state and federal law and, except for minor or administrative changes, require a public notice and comment period. All Revisions to the STIP have specific approval, review and public notice requirements; all of which are reviewed, tracked and approved by Alaska DOT&PF, Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). There are three main types of STIP revisions: an Amendment, an Administrative Modification, and Incorporation by Reference.

Amendment (AMD): An amendment is a formal, publically noticed revision of the STIP required when making certain types of changes. Amendments are not complete until they are approved by FHWA/FTA. The Department provides notice of a proposed amendment by publication of a notice in a newspaper of general circulation in the geographic area of the project, and by written notice informing MPO's, Tribes and others affected by the amendment. The notice describes the amendment and the effect of the amendment on the STIP, solicits comments, and provides for a comment period of 30 days following publication of the notice. An amendment is required when adding or removing a project from the STIP, when making changes to a project that have a significant increase or decrease in funding amount, a major change in fund scheduling, when adding a phase to a project, or when making major changes to the description and/or title of a project.

Administrative Modification (AM): An administrative modification is an informal revision of the STIP where the changes are minor and public notification is not required. An administrative modification may not affect fiscal constraint. Except in the case of an administrative modification of a transit project, administrative modifications do not require FHWA or FTA approval.

Incorporation by Reference (INC): Transportation Improvement Programs (TIPs) are incorporated into the STIP by reference. Typically, the STIP will incorporate TIPs from Metropolitan Planning Organization's (MPO), (See "Metropolitan Areas" below.) and Federal agencies such as Western Federal Lands (WFL) and the Bureau of Indian Affairs (BIA).

Public Involvement

Federal regulation, state regulation, state statute and Department policies and procedures govern public involvement in the transportation planning process. These laws and procedures guide the consultation and coordination required with Tribes, with MPO's, with other (non-MPO) municipalities and communities. DOT&PF solicits and evaluates public involvement during the project nomination period, during the public review period of the Draft STIP, and when amending an approved STIP. Interested parties may submit comments via the internet at www.dot.alaska.gov/stip or to the regional planners in Anchorage, Fairbanks or Juneau. A Regional Area Planner's map can be found at the STIP website.

The Department updates the STIP website often, making it the best place to check the dates for online meetings and public comment opportunities. http://www.dot.alaska.gov/stip.

Moving Ahead for Progress in the 21st Century Act

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 created a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

MAP-21 built on and refined many of the highway, transit, bike, and pedestrian programs and policies established in 1991. MAP-21 expanded the National Highway System (NHS) to incorporate principal arterials not previously included. Accompanying the expansion of the NHS was an increase in Federal spending on the NHS, with more than half of highway funding going to the program devoted to preserving and improving these highways.

MAP-21 restructured core highway formula programs. Activities carried out under some existing formula programs – the National Highway System Program, the Interstate Maintenance Program and the Highway Bridge Program – are incorporated into the following new core formula program structure:

- National Highway Performance Program (NHPP)
- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from HSIP)
- Metropolitan Planning

It created two new formula programs:

- Construction of Ferry Boats and Ferry Terminal Facilities (FBF) – replaces a similarly purposed discretionary program.
- Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU.

For more detailed information regarding MAP-21, please visit the web site:
http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Other Project Categories

Illustrative List (ILLU) - This STIP includes additional projects that could proceed if additional funding becomes available. The additional projects constitute the "illustrative" list of projects allowed under federal regulation 23 CFR 450.216(l). Should a scheduled project encounter delays and be unable to advance as proposed, if actual project bids come in lower than what we have estimated, or if sufficient funds are identified for other reasons, we will select a project from the illustrative list in order to make maximum use of the funds. If a project is selected from the illustrative list to move ahead, it must receive formal approval action from the FHWA or FTA before work can proceed.

Highway and Transit Maintenance and Operations (M&O) - After a project is completed and opened to public use, it is included in the department's routine maintenance schedule. Federal planning regulations require the STIP demonstrate that appropriate funds are available to adequately maintain and operate the surface transportation system as a whole. Most of the funds used to pay for maintenance and operations are state funds in the annual state operating budget.

Maintenance and operation forces are organized geographically, with regional offices in Fairbanks, Anchorage and Juneau. The regional offices manage highway maintenance stations distributed along the highway system and at key airports. Each region is staffed to adequately operate and maintain Alaska's highways. Maintenance is the responsibility of the state or local agencies that own and operate the roads and typically is not eligible for federal funding assistance, although an exception is made for certain types of preventive maintenance.

Maintenance and operation responsibilities include all the activities to keep our state highways, bridges, airports, buildings and harbors in good condition and safe for the traveling public. These include pavement repair, snowplowing, snow hauling, brush cutting, guardrail repair, sign maintenance, street/traffic light repair, drainage structures, fence maintenance, airport light repair, airport safety, security and facility repairs.

Metropolitan Planning Organizations (MPOs) - Federal regulation requires that each state transportation department develop a STIP for all areas of the state outside of MPOs. For metropolitan areas, the MPOs develop their own TIPs (Transportation Improvement Programs), which are approved by the Governor or his/her delegate and incorporated by reference into the STIP. Alaska has two Metropolitan areas: Anchorage Metropolitan Area (AMATS) and Fairbanks Metropolitan Area (FMATS). Each TIP and all amendments are incorporated by reference into the STIP and are linked to the STIP website at www.dot.alaska.gov/stip.

Public and Human Service Transportation (Transit) projects in the STIP - The Federal Transit Administration (FTA) administers several public and human services transportation grant programs that provide financial assistance to develop new transit systems and to improve, maintain, and operate existing systems. Like highway federal-aid programs, each public transportation program has different requirements intended to meet specific needs as determined by Congress. While some funds flow directly from FTA to designated recipients with the legal authority to receive and dispense federal funds, such as cities, towns, regional governments, or transit authorities, DOT&PF administers many of the grant programs in Alaska according to the specific requirements of each.

EPA Air Quality Issues and CMAQ Projects

Alaska has air quality nonattainment areas and maintenance areas. "Nonattainment" areas are those areas that fall below air quality standards. "Maintenance areas" are those that now meet air quality standards, but need funds to maintain the improvements and programs that got their air quality to acceptable standards.

- Portions of Anchorage and Fairbanks/North Pole are classified as maintenance areas for carbon monoxide (CO);
- Juneau's Mendenhall Valley and portions of Eagle River are currently classified as coarse particulate matter (PM-10) maintenance areas.
- A portion of the Fairbanks North Star Borough has been classified as a nonattainment area for fine particulate matter (PM-2.5)

While the air quality of Alaska cities has improved dramatically for CO and PM-10 since the early 1980s, Anchorage, Fairbanks and Juneau are required to continue to measure air quality impacts of transportation projects under the federal Clean Air Act. These communities, with assistance from the Alaska Department of Environmental Conservation (ADEC), must periodically prepare updates to the State Implementation Plan (SIP) that demonstrates maintenance of CO and PM air quality standards.

The Clean Air Act prohibits federal actions that could cause new air quality violations or otherwise jeopardize attainment of air quality standards. This policy requires a review of all planned transportation projects in Alaska's nonattainment and maintenance areas to ensure they will not lead to decreased air quality. This analysis, known

as “transportation conformity,” requires a demonstration that highway and transit projects are consistent with the most recently approved maintenance SIP emissions budget for CO and/or PM, now and in the future.

Metropolitan Transportation Plans (MTP) and Transportation Improvement Program (TIP) projects proposed for construction within air quality nonattainment and maintenance areas must undergo regional and project-level analysis to make sure they conform to the SIP. Regional analysis looks at the combined emission impacts of all projects in an area for each year within the TIP timeframe, an approximately twenty-year period. The regional analysis must consider all transportation projects, regardless of funding source. Project-level analysis looks at the emission impacts at the project location to ensure no new localized “hot-spot” violations of the air quality standards will result.

Air Quality Emission Caps - In nonattainment and maintenance areas air quality emission budgets are required as part of approved State Implementation Plans (SIPs) for communities. These approved conformity caps or air emission ‘budgets” cannot be exceeded in future years. Conformity is a requirement where the TIPS and MTPs are shown to not exceed the emission budgets or that projects will not cause or increase any air quality problems. Federal rules require that conformity determinations on TIPs and MTPs be updated within 18 months of any newly approved emission budget. Federal rules also require that conformity determinations on TIPS and MTPs are updated every 4 years to incorporate the latest planning assumptions, growth projections, vehicle miles travelled (VMT) and fiscal constraint. Additionally, conformity determinations are required when changes or amendments to TIPS and MTPs trigger the requirement. Limited maintenance plans, such as those for carbon monoxide in Anchorage and Fairbanks, and particulate matter (PM10) in Eagle River and Juneau, do not require the emission budget test, but they still require a conformity determination.

Rural Particulate Matter - Recent air monitoring in rural areas of Alaska indicates that some areas experience high concentrations of particulate, mostly dust. One source of the particulate matter in these communities is the road dust from the use of vehicles (cars, trucks, and four-wheelers) on unpaved roads. DOT&PF and ADEC are working together to identify possible solutions to the problem. Community outreach is underway in some areas to bring local ideas into the process:

- watering roads during dry periods,
- use of chemical additives (salts) mixed with water to alleviate dust
- speed limits and limiting mechanized travel,
- rerouting traffic away from elder’s homes or local schools (areas with sensitive people: elders and children), and
- road paving

All control options have both advantages and disadvantages. In order to find a practical option for each area, it will likely be necessary to tailor a specific solution to that area.

Project Programming in the STIP

The STIP is made up of projects, divided into phases, scheduled according to the time estimated to accomplish each phase and the funding needed to complete it. Each funding source has different requirements or objectives, so the final selection of projects for the STIP will depend upon the available funding.

Planning, Phase 8 - In the planning phase, a project need is identified, its purpose and preliminary scope or description is prepared, supporting material is gathered, and the project is evaluated, ranked and programmed. Project nominations may come from DOT&PF maintenance or other support personnel who encounter a problem in the field; through analyses from bridge, pavement management or highway safety programs; and from local governments, other state or federal agencies, and the general public. Projects to address specific problems may be combined with others in the same area or of the same type to address multiple roadway issues while reducing engineering and administration costs. As part of the planning process local, regional, statewide and modal plans and other sources are consulted to refine and justify the projects and preliminary cost estimates are prepared. Finally, the projects are evaluated and prioritized in accord with the Statewide Long-Range Transportation Plan, then scheduled into the program as funding permits.

Design (Preliminary Engineering), Phase 2 - The design or preliminary engineering phase typically takes the longest time of the phases to complete. It takes the relatively broad outlines of a project and through increasingly detailed steps refines the project to develop highly specific project plans that construction contractors use to guide their work. A larger or more complex project may include a reconnaissance study to outline the issues involved, identify and analyze alternative solutions, and provide comparisons of the alternatives. Every project will entail some level of environmental review; the more complex or controversial projects may need detailed environmental impact studies, while simpler, routine projects may qualify for categorical exclusions. During the environmental review, design staff develops practicable or reasonable alternatives to the extent necessary to evaluate environmental impacts and estimate costs. Not all costs can be identified at this point, however, that will come as the project is further developed.

The design process also includes preliminary right of way and utility identification and, if needed, detailed right of way and utility phases. Some projects may warrant a project-specific public involvement plan (PIP) to inform the public and to ensure that all reasonable alternatives are identified and that public and agency concerns are considered and addressed before committing to a preferred action. Support groups such as bridge, geotechnical/materials, hydrology, traffic, right-of-way, surveying, and utilities will also prepare specific studies, reports and design documents as needed as the project progresses.

Right of Way, Phase 3 - During the design phase the right-of-way (ROW) staff review the preliminary plans for each alternative under consideration in the environmental process. The staff prepares base maps and estimates of the probable number of parcels for each alternative and their acquisition and relocation costs. Each alternative is also assessed in terms of the number and socio-economic effects of residential and business relocations it causes. The results are included in the project's environmental document.
After the design of the project is completed and approval is given to move ahead, the ROW staff appraise the fair market value of land needed, including affected improvements, negotiate property acquisitions, relocate any displaced families and businesses, and certify the department's ownership or land interest. They also are charged with controlling encroachments and disposing of lands no longer necessary for public use.

Construction, Phase 4 - The construction phase includes all activities involved in building or altering an existing road or structure, including clearing land, demolition, excavation, moving material to establish curve and grade, drainage, fill, pavement, erection of bridges, guardrails, traffic signals, lighting, culverts, and traffic control. Depending on the project and location, it may also include temporary detours, steps to prevent or mitigate environmental problems and landscaping. Construction may take anywhere from a few days or weeks to several years to complete.

Utilities, Phase 7 - For each alternative under consideration in the design phase, the utilities engineer reviews preliminary plans that show line, grade, slope limits, and clear zone widths, and the plans are shared with the affected utility companies. The utility determines the adjustments and relocations necessary to avoid conflict with the project (which may warrant revising design plans), designs the changes to its facilities, and prepares plans and cost estimates to support the relocation agreement. In some cases, DOT&PF or a consultant performs the utility relocation design for relocation work to be included in the contract. The utilities engineer will verify adjustments or relocations necessary for each alternative and rough cost estimates. If additional right-of-way is necessary to accommodate utility relocation, these requirements will be shared with the ROW section for inclusion into the ROW cost estimates. After the design is completed and the project is approved to proceed, utility relocations may begin. Relocation may be performed by the utility company, by a contractor managed by utility or the department, or as part of the department’s highway contract.

Each of these phases may involve anywhere from a few months to many years to complete. Some projects require all of these phases, while others may need only design and construction phases. In addition, depending on the complexity of the project, each phase may consist of a number of intermediate stages. The life of a project, from identification to completion may range from a few months (rare) to many years.

The STIP Website

www.dot.alaska.gov/stip is where you will find the most current information on the STIP and the projects planned for your area.

STIP and Project Reporting Tools - There are several ways to view the current approved STIP and the Draft 2016-2019 STIP, all of which are linked to the main STIP website. The official version of the STIP is the PDF version linked to the main site and the most recently approved on the revision summary table. The official version will be a complete packet including contact information, a table of contents, this introduction, project pages and other relevant information located in the appendices at the end. Every time the STIP is updated, the details will be added to the revision table along with a link to the approved STIP associated with that revision. The live search allows users to select STIP project information based on filters they choose. If no filters are chosen, all projects in the STIP will be listed. Using this tool, a user can get a custom list of STIP projects, choose how they are sorted and decide whether they want a report in Excel or HTML format.

If you have trouble accessing information, or want to report an issue, please contact the STIP office for assistance.